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A Survey of Economic and Fiscal Conditions and Prospects

Government Policies

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NEW YORK, 1930

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New York

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President, The United Press Associations

SCHOLARSHIPS

Effective—

Journalism Scholarship, in compliment to Chilean journalism, School of Journalism, Missouri State University, Columbia, Mo.

Completed—

Mining and Metallurgy—Massachusetts Institute of Technology.

Medicine and Surgery—New York Post Graduate Medical School and Hospital.

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FOREWORD

CHILE presents a rapidly unfolding chapter of economic and fiscal progress. To keep the public advised of this progress is one phase of the activities of the Chile-American Association. The demand for up-to-date information is so continuous that the Association finds it desirable to supplement its previous monographs by a concise survey of Chile in 1930. Descriptive information of the geographical situation and physical nature of the country contained in previous monographs does not call for repetition especially since the large and increasing number of visitors to Chile enables them to supplement the published matter by personal observations. The many inquiries received indicate that what is wanted by the general public is data regarding existing commercial, fiscal and industrial conditions and the program of the progressive policies of the administration of His Excellency, Señor Ibañez, the President.

Chile as a world economic factor, a survey of her resources and her contributions to the world's agriculture and industries, her internal development and the program of the government for its expansion, her foreign commerce, her trade with the United States and the reciprocal influence which the capital from the United States has in expanding the mutual trade as well as the effect of the large investments in Chilean securities, is therefore the foreground of this survey. The material is drawn from official reports and documents.

Chilean progress during the last two years, both in international relations and in domestic development, under the administration of His Excellency, Señor Ibañez, the President, has opened a new era for the country. The long standing controversy over Tacna-Arica was honorably adjusted to the satisfaction of both Chile and Peru. In his annual message President Ibañez described it as a transcendant event in the American life which merited the praise of public opinion and was welcomed throughout the world as an effective contribution to the work of peace and conciliation which collective internationalism seeks. It has, he said, created between Chile and Peru a firm understanding, material and spiritual, whose favorable results cannot be estimated. The government, he said, in the measures taken for carrying out the agreement, placed much stress on the fact that the new order of things respecting Peru was in accord with the motives

of coöperation embodied in the terms of the treaty and had been reciprocated by the government of Peru in the most generous spirit.

In international affairs Chile has ratified the treaty for the proscription of war known as the Kellogg Pact; the general convention of inter-American concilliation and the treaty of inter-American arbitration and the protocol of progressive arbitration, signed in Washington. It has also promulgated the treaty relative to the permanent court of international justice. Other international agreements ratified were the Pan American Sanitary Code and the Paris Convention regarding the movement of automobiles and highway transit.

President Hoover's visit to Chile in December 1928 marked a new era in the relations between the United States and Chile. It strengthened the sympathetic understanding of the mutual interests of the two countries in their industrial and trade relations and led to closer association in the development of Chile's resources. Evidence of this is shown in the measures taken by Chile in her policy of public works, road building, harbor improvements, and the like. A feature of this is found in the coöperation of Chile in providing for the international motor highway work already begun assuring the completion of the Chilean section from the north to Puerto Montt in the south and to the passes of the Andes.

SOURCES OF CURRENT INFORMATION

CURRENT information regarding Chilean finances, trade, industry, social progress, government measures, as well as descriptive matter of present day interest, is to be found in the illustrated monthly magazine "CHILE" published by the Chilean Consulate General in New York. See especially "The Monthly Survey" for the latest data.

The English edition of the "Monthly Bulletin" of the Banco Central de Chile gives the current data on government finances, business conditions, mineral and other production, foreign commerce, banking operations, and fiscal affairs.

Reports of the American commercial attaché at Santiago on commercial and industrial conditions together with consular reports and reviews are issued from time to time by the Bureau of Foreign and Domestic Commerce. They are both statistical and general. An example is "Chile—Tabular Guide to Economic Conditions." Also "Railways of South America—Chile."

The Pan American Union publishes annual reviews of Chilean commerce together with special pamphlets descriptive of the country. Its latest descriptive publication is "Nitrate Fields of Chile."

The Chilean government maintains an Information Service for the benefit of tourists and other visitors. This advises them concerning passport regulations, facilities for travel, hotels, railway and steamship itineraries and the like. Folders, books, photographs, and films, describing the country will be available on board arriving steamers. Special questionnaire forms may be filled out, and transmitted to the government from any point of the ship's route. Information may be obtained by addressing "Sección Turismo—Sección Propaganda," Santiago, Chile.

COMMUNICATIONS

AIR MAIL SERVICE

The inauguration and successful maintenance of air mail and transport communication between the United States and Chile is unquestionably the most significant recent development in the process of bringing these two republics into closer relations one with another.

Such communication was made possible by the extraordinary celerity with which foreign air mail, carried by Pan American-Grace Airways Inc. under contract with the United States Post Office Department, increased in distributive scope, volume, and frequency of service.

Chile's swiftest contacts with the United States have come always by way of the Isthmus and Canal of Panama. The choice of the West Coast of South America rather than the East, as an air mail route not only to the West Coast republics but to those of the great Plate Basin, was made inevitable by a purely geographical condition. A line drawn due South from New York would pass almost directly through the Isthmus of Panama and Santiago, capital of Chile, leaving only a fraction of the South America continent lying West of it and demonstrating the shortest possible route between New York and Santiago.

For this reason, when the United States Government commenced to establish foreign air mail routes, and the first of these to be extended beyond Mexico or closely adjacent Caribbean countries, was served by Pan American Airways Inc. from Miami via Cuba and Central America to Cristobal in the Canal Zone, the choice of a route into South America proper fell logically upon that continent's West Coast.

On March 2nd, 1929, therefore, the Post Office Department awarded to Pan American-Grace Airways Inc. a contract to carry United States air mail from Cristobal, Canal Zone, via various points in Colombia, Ecuador, Peru and Chile to Santiago, Chile, with provision for subsequent extension over the Andes to Buenos Aires, Argentina and Montevideo, Uruguay. Service was inaugurated on May 17, 1929, as far South as Mollendo, Peru, was extended on July 16 to Santiago; to Buenos Aires on the 12th of the following October, the anniversary of the discovery of America by Columbus; and to Montevideo, Uruguay, on November 30th. Thereby it became possible for a letter mailed in New York to be delivered in Montevideo in 10 days, being flown from New York to Miami by domestic air mail line, from Miami to Cristobal, Canal Zone, by Pan American Airways Inc. and from Cristobal via the West Coast, and Santiago, to Buenos Aires and Montevideo, a total distance of 7,000 miles, composing the longest continuous air mail route in the world.

On April 25th this schedule was reduced to seven days, an alteration made possible by the successful establishment of Pan American

Airways service from Miami via Cuba directly across the Caribbean to Puerto Cabezas, Nicaragua, and thence to Cristobal, Canal Zone. This saved 760 miles in distance and more than two days in time over the circuitous route previously operated in Central America and, moreover, caused the West Coast route to Buenos Aires and Montevideo to be made 1,420 miles shorter than any East Coast route in operation. But the Central American service was maintained, effecting a connection with the western part of the United States at Brownsville, Texas. By accelerating the flying south of the Canal Pan American-Grace Airways contributed its part to the seven day schedule. The first mail was carried as far as the Canal Zone on this shorter and faster route by Colonel Charles A. Lindbergh, technical adviser to the Pan American Airways.

Owing to the lack of governmental appropriation during the first year of its operation, the air mail service from Cristobal to Montevideo was limited in frequency to one performance a week but provision having been made by Congress for additional service this was, on July 1st, placed upon a twice weekly basis from Cristobal, Canal Zone, southward, being still administered on a seven day schedule, so that anywhere along the route from New York to the Canal, the West Coast and Santiago, to Buenos Aires and Montevideo, it is possible to receive a letter from New York and by air mail dispatch, by return plane, a reply within three days. Thus, a correspondent in New York may receive a reply to his or her communication to Santiago in fifteen days and to Buenos Aires and Montevideo in seventeen days. The steady increase in the volume of air mail over this route is evidence of the appreciation of this facility in communication manifested by the business publics and the peoples of the various countries served. Of incalculable value to the business enterprises of both continents, the ready transmission by air mail of significant documents, plans, contracts, and generally vital intelligence, has caused executives wherever situated to advocate the use of this service as a matter of routine save in exceptional cases where the cable is indispensable. Nor have its benefits been unknown to the professions, since lawyers, doctors, and above all civil engineers, by it communicate with clients, patients and associates with far more rapidity than by the agency of the steamship, and far less expensively than by that of the cable.

Passenger transportation in addition to the mail service is furnished by Pan American-Grace Airways Inc. from Cristobal as far South as Arica, Chile, and it is hoped that the near future, will see

this service extended to cover the entire route. An express service also has been established.

On the East Coast the New York, Rio and Buenos Aires Line operates an air mail service between Buenos Aires and New York and a weekly passenger service between Santiago and Buenos Aires.

From this establishment of fast and frequent aerial communication Chile, in especial, is in a position to benefit, since her capital city constitutes the southerly corner of the shortest air route now under operation, not only between herself and the United States, but between Argentina and Uruguay and the same objective, as demonstrated by figures obtained from the United States Coast and Geographic Survey.

Meantime the Pan American-Grace Airways Inc. has continued its efforts to improve the service and has demonstrated the possibilities. The company now has a fleet of fifteen planes of different types necessary to make certain the schedule and keep an ample margin of safety. It maintains a large flying and ground force strung out along the 4,600 miles of route. The record flight was made the last week in April when Colonel Charles A. Lindbergh, technical adviser of the company, who has laid out the majority of the air routes, piloted a mail airplane from Miami to Havana and thence across the Caribbean to Nicaragua and Cristobal. At Cristobal the mail was taken by R. H. Moore, a pilot of the Pan American-Grace Airways and was delivered in Santiago on the following Thursday and in Buenos Aires on Friday, the time between New York and Santiago being six days. The schedule was made possible by speeding up domestic schedules between New York and Miami through the aid of night flying, by the establishment of a new and direct route across the Caribbean from Miami to Panama, the longest scheduled over ocean flight in the world, and by improvement of ground facilities in South America to such an extent that two days are cut off from Panama to Buenos Aires.

Tourists and business men may travel between any cities in the United States and the principal cities in Mexico, the West Indies, Central and South America either north or southbound. Such passenger service is available by reason of the arrangements made by the Pan American Airways System with the establishment connecting transportation companies in this country, so that through tickets can be purchased at the principal railroad ticket offices and prominent travel bureaus. The result is not merely an air line but a great transportation system dedicated to the development of commerce and a better understanding among the people of the Western Hemisphere.

AVIATION

Chile leads South American countries in aviation. The army and navy air service has been amalgamated and a new department in charge of civil and military aviation created as a part of the Department of the Interior with an undersecretary in charge. The national air service is thus kept under the direct control of the government. Regular mail and passenger service is in operation between Arica at the northern boundary and Santiago, six times a week and twice a week between Santiago and Aysen with stops at Temuco and Puerto Montt. The final link in the air service connecting northern and southern Chile was completed early in 1930 by the experimental flight of Commandant Merino Benitez from Puerto Montt, the terminus of the Longitudinal Railway, to Magallanes (Punta Arenas), the southermost town in the world, covering in a hydroplane a distance of nearly 1,000 miles, most of it over unexplored territory. A company has been formed to aid in the extension of the national air line from Puerto Montt to Magallanes and the government has authorized expenditures for the construction of air ports and the acquisition of planes in connection with this new line. At present connections are made at Puerto Montt with hydroplanes that go as far as Puerto Aysen in the Chiloe archipelago. A regular air craft service is maintained between Santiago and Calama near the Chuquicamata copper mines in northern Chile. Two international companies have extended their lines across the Andes, the Pan American-Grace Airways Inc. along the West Coast and from Santiago to Buenos Aires, and the Nyrba from Buenos Aires to Santiago.

A squadron of amphibians has headquarters at Chamiza in Puerto Montt uniting that port with Chiloe, Aysen, and other regions of the south. As far back as 1913 Chile had a military air school and civilian aviators. The military aviation service of Chile is one of the best equipped and most complete of any country in the world. It is now being adjusted as part of the national air service to civilian aviation.

Commercial aviation was given a marked stimulus by the Daniel Guggenheim fund of $500,000 for its development. American airplane factories and aerodromes have been established in Chile and Chilean mechanics have been sent to the United States to undergo training in the manufacture of motors while officers of the military aviation school have been sent to Detroit to study manufacturing methods. In recognition of Chile's rapidly expanding aviation developments the United States named as its military attaché to the American Embassy at Santiago an officer of the air service.

The flight of Lieutenants Will W. White and Clement McMullen, United States army aviators, in February, 1930, to Buenos Aires by way of Arica established a speed record for elapsed time and actual flying time. The complete journey was made in five days, five hours; actual flying time was fifty-two hours, fifteen minutes. Average speed for the 6,970 miles was 131 miles an hour. In the opinion of Lieutenant White this flight demonstrated the practicability of the Pacific Coast route as an air line to South American cities and the reliability of modern commercial aircraft for long distance routes.

EXPRESS STEAMSHIP SERVICE Communication between the United States and Chile other than by air has also been the subject of notable development. The day following that which saw Colonel Lindbergh take off to open the 7-day air mail service above described, witnessed the maiden sailing of the Grace liner "Santa Clara" which thereby inaugurated the fastest sea service in history between the United States and Chile. This brought Valparaiso within sixteen, Callao within nine and the Panama Canal within five days of New York with the consequent result not only of radically affecting for the better travel conditions between these points and the United States but of noticeably expediting travel time between the West Coast of South America and the continent of Europe.

The establishment of such a service is of the utmost significance to all the countries affected, since it removes the barrier hitherto imposed by the time element upon inter-American travel and brings the United States and the West Coast republics of South America conclusively into close touch with one another. Chile's great port of Valparaiso being the southern terminus, Chileans in particular benefit by being no longer required to spend a month at sea in order to attain Europe or three weeks in order to reach the United States.

RADIOPHONE Chile now talks with all the world. It is in radiophone communication with virtually all the millions of telephone subscribers in the United States and with those in almost every country in Europe as well as with its neighbor countries. Direct radio telephone service between the United States and Chile was established on February 3, 1930, when President Hoover in Washington and President Ibañez in Santiago exchanged greetings over short wave stations of the General Electric Company. In April messages were exchanged between President Ibañez and King Alfonso in Madrid.

The first direct wireless communication was in June, 1928 when Don Carlos G. Dávila, the Chilean Ambassador at Washington, broadcasted from New York to Chile the acccount of the reception given the officers and crew of the training ship *Baquedano*. Since then the Ambassador has made use of the system at various times to address the Chilean people and also the people of the United States. Among the most notable of these addresses was the one broadcasted from the General Electric studios at Schenectady in March, 1930. Programs of Chilean music are broadcasted by the Pan American Union at Washington from time to time.

Chilean telephone service with the United States is maintained through the Chilean Telephone Company, a subsidiary of the International Telephone and Telegraph Corporation, and by the All America Cables and other cable and telegraph companies. Transmission from New York is through a powerful short wave transmitter of the Radio Corporation of America situated at Rocky Point. Long Island. The Chilean end of the circuit is operated by the Trans-Radio Chilena Company having its central office in Santiago with transmitting and receiving stations situated at Quilicura, eight miles outside the city.

An example of the advantage which has been taken of the facilities for prompt business transactions is given in the following excerpt from a New York newspaper:

> "Big business went about its affairs in an extremely modern manner when representatives of the Chilean State Railways telephoned from Santiago, Chile, and ordered four fast electric passenger locomotive from the Westinghouse Electric and Manufacturing Company. The order totals about $500,000 and ordinarily negotiations of this sort are carried on by letter or cable, involving considerable delay.
>
> "During the discussion of the order some minor engineering problems arose and R. L. McLellan, general manager of the Westinghouse Electric International, at present in South America, immediately telephoned his New York office. After receiving the desired information, Mr. McLellan conferred with the railway officials and the order resulted."

In relation to South American countries obstacles of distance and mountain barriers have been overcome and Chile talks with those of the same racial origin and language on both sides of the Andes with the same facility that its people converse among themselves over the phone. Direct telephone service between Chile, Argentine and Uru-

guay is maintained between five telephone companies associated with the International Telephone and Telegraph Corporation. The system constitutes the largest telephone system in South America and unites practically all the lines south of Brazil. The circuit passes under one of the world's broadest rivers and crosses one of the world's highest mountain ranges where an underground cable is necessary to maintain service through the winter snows of the Andes. This trans Andean circuit follows the route of the All America Cables telegraph line from Santiago to Argentina.

Chile has more than 42,000 telephones in use. During 1929 the number of subscribers increased fifty per cent.

FISCAL AFFAIRS

THE BUDGET A birdseye view of Chile's financial, industrial and commercial situation is obtained from the budgets for ordinary and extraordinary purposes for the calendar year 1930.*

A report published by the Ministry of Finance, covering the years 1928 and 1929, stated that the financial reforms introduced in 1927 had been highly successful. In evidence of this the report cited increasing surpluses in government budgets. Income during 1928 was 1,021,041,309 pesos ($124,260,726); expenditures were 932,733,620 pesos ($113,513,681). Income during 1929 was 1,267,556,410 pesos ($154,261,615); expenditures, 1,189,934,-017 pesos ($144,814,970). Surpluses amounted to 88,307,689 pesos ($10,787,045) in 1928 and 77,622,393 pesos ($9,446,645) in 1929. Estimated income for 1930 was 1,214,650,000 pesos and estimated expenditures 1,159,323,798 pesos.

Income from direct and indirect taxes in Chile for 1930 in the original budget was estimated at 997,500,000 pesos, proceeding principally from the following sources: customs house import duties, 325,000,000 pesos; export duties on nitrate, 170,000,000 pesos; income tax, 210,000,000 pesos; tax on landed property, 64,000,000 pesos; additional property taxes, 50,000,000 pesos; tax on cattle, 10,000,000 pesos; import duties on parcel post, 10,000,000 pesos; tax on tobacco, 25,000,000 pesos; tax on alcohol, wines, beers, 26,000,000 pesos.

Late in April the government, following a cabinet meeting at

* The peso is calculated at 12.17 cents as established on the gold basis in accordance with the recommendations of the Kemmerer Commission in 1926.

which the Minister of Finance explained the probable effects on Chilean prosperity of the world slump in the prices of agricultural and mineral products, decided to reduce expenditures this year by 40 million pesos, and to prepare the budget for 1931 on a basis of a reduction of 80 million pesos in expenditures. This was purely a precautionary measure, since national and private finances were in excellent shape, and Chile's credit abroad exceptionally good. Later, further cuts were made in the budget. The government is thus ready to meet any emergency that may arise due to the present world situation.

Last year a reduction in the army establishment was made and this has since been extended, thus insuring a sizeable reduction in the military expenditures.

Supplementing the regular or ordinary budget is the extraordinary budget which provides for the system of public improvements authorized in the basic extraordinary budget law and the plan of public works, and also expenditures to be made in accordance with various special laws. This calls for expenditures of 390,797,000 pesos ($48,240,000) and revenues of 392,420,000 pesos ($49,445,000), as authorized in the five years construction program. The 250,000,000 pesos road laws are the principal provisions of this program. The balance will be made up with a loan of 318,236,000 pesos to be issued in 1931 under the extraordinary plan of public works which calls for loans and makes provision for their authorization.

PUBLIC DEBT The "Monthly Bulletin" of the Banco Central de Chile summarized the public debt as of January 1, 1930, based on the statement of the Comptroller General, as follows:

> "The debt is divided into direct and indirect obligations. The former is that contracted directly by the National Government and the service of which is a charge against the ordinary revenues and is included in the budget. The indirect debt is composed of debts of cities, railroads, mortgage banks, etc., which are guaranteed by the National Government, but the service of which is attended to by the entity directly interested and from their own income.
>
> "There is also a division into internal and external debt; the first being issued in the country in pesos, and the other in foreign countries and in foreign currency."

	Pesos	*Dollars*
Direct Internal Debt	322,893,333	39,296,118
Indirect Internal Debt	64,347,500	7,831,090
Total	387,240,833	47,127,208
Direct Foreign Debt	2,289,340,236	278,612,706
Indirect Foreign Debt	1,068,495,317	130,035,879
Total	3,357,835,533	408,648,585

"The total funded foreign and internal debt of Chile, at the beginning of 1930, according to the above figures was approximately $455,776,000. Included in the foreign debt are loans guaranteed by the government, such as those of the Mortgage Bank of Chile, and municipal loans. These are only issued on the authority of the central government and are strictly supervised by it. Funds set aside for the service of the public debt amounted to less than 22% of the revenues in 1929. This was less than that for the public debt of the United States, France, Brazil or Argentina and was about $7.50 per capita."

In terms of Chilean currency approximately 2,000,000,000 pesos ($243,400,000) of the Chilean public debt is held in the United States, 1,260,000,000 pesos ($153,250,000) in Great Britain, 62,395,000 pesos (7,593,471) in Switzerland, and 36,649,000 pesos ($3,800,000) in Germany. This was the situation at the beginning of 1930. In April a new loan of $25,000,000 was floated in the United States. The proceeds are to be used to carry out the program of public works, to supply $2,000,000 capital to the Mining Institute, a government credit institution, and to refund short terms borrowings incurred in connection with it.

UNITED STATES INVESTMENTS IN CHILE

United States investments in Chile are authoritatively estimated at from $750,000,000 to $1,000,000,000. Compared with the $25,000,000 which was the amount in 1908, a little more than a quarter of a century ago, these are astonishing figures, but they have a solid basis. They are due to two causes. One is the development of Chile's mineral resources and particularly the great copper mines of Chuquicamata, Potrerillos and El Teniente. Development of these properties has been accomplished after many years of great effort and many large expenditures. Capital expenditure for replacements, enlargements of existing plants to make provision for future needs, the erection of smelters and metallurgical plants, the construction of power plants, have added yearly to the total investments and these are in their nature reproductive. Of recent years the United States investments also have turned to the nitrates. Purchases of properties from other companies, exploitation of fresh nitrate fields, the stimulus given the industry by the new refrigerating process of the Guggenheims, and the saving thus effected in the cost of production which has added to the value of the nitrate oficinas, swell the total.

The other cause is the investment by citizens of the United States in Chile's government securities, chiefly dollar loans. Knowledge of the potential value of Chile's natural resources, confidence in the ability of the government to sustain the high credit which Chile always has maintained, have been a contributing factor. The co-operation of financial institutions in the United States has been welcomed by the Chilean government. The National City Bank of New York, which has branches in Santiago and Valparaiso, is the fiscal agent of Chile in the United States. The very large investment of United States capital in Chile is evidence of confidence in the value of her natural resources and in the financial integrity of the country and the growing amity between the two nations.

MINERAL PRODUCTION

THE NITRATE INDUSTRY

Chilean nitrates continue to be a principal source of fertilizers for the world's agriculture. The nitrate industry in 1930 is going through a period of reorganization. The present situation is to be understood in the light of the measures taken toward an adjustment of world conditions. The technology of the industry has been greatly improved through the government measures adopted to secure greater efficiency in production and marketing and through the application of the Guggenheim process of refrigeration in the plants of the Anglo-Chilean Consolidated Nitrate Corporation and other companies.

A summary of the production and exportation of nitrates during a four year period, taken from Chilean official statistics, is as follows:

	1926	1927	1928	1929
		(*Metric Tons*)		
Production	2,016,700	1,614,100	3,164,800	3,237,600
		(*Value in Pesos*)		
Exportation	710,300,000	860,200,000	935,300,000	952,500,000

Recent developments are described in the report of Commercial Attaché Ackerman:

"Recognizing the necessity of intervention in the face of the increasing competition from other fertilizers, both from the standpoint of the income to the fiscal treasury and its importance to the economic structure of the country, the government undertook studies which resulted in the conclusion that the system of free selling, which had been in practice for eighteen months, had not permitted the proper development of overseas markets nor led to economic distribution. Producers were urged to adopt a plan of selling that the government believed would permit better control of selling prices to the consumer and eliminate excess profits to distributors.

"The Nitrate Producers Association agreed to these proposals in August, 1929, and formed a selling combine. To insure proper distribution the government agreed to return from the funds received as export tax a sum equivalent to the difference between the prices at Chilean ports and 17 shillings. In other words, the producer who entered this combine was assured of a selling price of 17 shillings f.a.s. port of embarkation, so that the actual price at which he sells in a given market, within the quota allocated to him, brings the same return as in a market where prices reigning are higher.

"Another interesting and significant development of the year was the increasing concentration of production. The peak of production, prior to 1928, was reached in 1927, when 30,010,000 metric quintals were turned out. During that year the number of oficinas operating ranged from 118 to 124. Production during 1928 exceeded 31,600,000 metric quintals and the number of oficinas operating did not exceed 69 at any time. In other words, many of the high-cost oficinas have ceased operations, and their production has been taken up by the more efficient units. This practice has led to a decided trend toward combining properties, and several of the small companies have been acquired by larger groups, with the result that of the total production more than 85 per cent was accounted for by five large producers.

"The policy of greater centralization of production was further carried out through the acquisition by one of the Yugoslav groups of several additional units, and especially by the transfer of control of the largest producer to those American interests

that controlled the Anglo-Chilean Consolidated Nitrate Corporation. When effecting this transaction, an issue of $32,000,000 of bonds was floated in the United States for the purpose of financing the erection of another 500,000-ton unit using the Guggenheim process."

The Chilean government has recognized the new conditions confronting the national nitrate industry and the synthetic nitrates as factors in world production and consumption. It participated in the calling of the International conference of nitrate producers which opened sessions in Paris in May. An official statement from the Ministry of Finance, after the conference opened, was to the effect that technical and legal experts of the Ministry continued studying the proposed amalgamation of all nitrate interests into one organizaion in order to lower production costs through increased efficiency and the elimination of competition and waste. Another official statement was that the government had been giving study to the consolidation of the nitrate industry with the object of reducing production costs, improving the commercial and technical situation of the industry, and facilitating the securing of credit for its improvement and that whatever unit is formed will be of great importance because of the size of its capital and production.

The successful conclusion of the Paris negotiation was described in the following official statements of the Chilean Consulate General in New York:

"The project of law covering the formation of the organization that is to merge the leading nitrate interests into one, was sent to Congress by the President on May 23. The proposed concern is being organized with the purpose of fostering nitrate production through the elimination of inefficient methods of production, and unfair competition the development of better systems of sales and distribution, and the promotion of co-operation between the government and private interests. The document consists of eleven chapters and forty-four articles, authorizing the creation of the Compañia Salitrera de Chile (Nitrate Company of Chile"), already known by the abbreviated form of "COSACH." Its capital will be of 3,000,000,000 pesos made up of 30,000,000 shares of 100 pesos each. Two kinds of stock will be issued: Shares "A" owned by the government which will comprise half of the capital, or 1,500,000,000 pesos; and Shares "B" to be issued as required, payable in three different forms. The State agrees to deliver to the company

nitrate fields with resources of 150,000,000 tons of nitrate, other nitrate fields in excess of this total to be reserved for the State exclusively, but which can be delivered to the company at the rate of 10 pesos per ton of nitrate available. The "A" Shares are not transferable nor can they be offered as security.

"The company will be administered by a directory composed of twelve individuals, four of which will be appointed by the President for terms of six years each; seven will be elected by the holders of "B" shares and one by the holders of preferred shares, for terms of one year. Eighty per cent of employees and laborers engaged in activities in Chile must be Chileans.

"Nitrate and iodine produced by Cosach will be exempt from export duties. The concern will be subject to all taxes governing such concerns as provided by Chilean law, but the income tax paid will be of the fourth category or only 6%. Dividends paid by Cosach to shareholders will be exempt from the second category taxes stipulated by the income tax law.

"During the years of 1930, 1931, 1932, and 1933, the company will guaranty to the State as dividends on its shares and income tax the following sums: 186 millions, 180 millions, 160 millions, and 140 millions of pesos respectively.

"Up to this date the following companies with the following annual production have joined this merger: Angela Nitrate Company, 38,000 tons; Santiago Sabioncello, 130,000 tons; Allianza, 137,000 tons; Liverpool, 118,000 tons; Lagunas, 20,000 tons; Lagunas Syndicate, 21,000 tons; Pan de Azucar, 33,000 tons; New Tamarugal, 153,000 tons; Rosario, 65,000 tons; Taltal, 81,000 tons; Tocopilla, 181,000 tons; Lautaro, 709,000 tons; Loa, 169,000 tons; Kyrima, 20,000 tons; Aguas Blancas, 51,000 tons; Pacha and Jaspampa, 16,000 tons; Junin, 46,000 tons; Tarapaca, 79,000 tons; Taratoco, 139,000 tons; Anglo-Chilean, 48,000 tons. All of these companies use the Shanks process.

Companies operating under the Guggenheim system that have joined, are the Anglo-Chilean Consolidated and Nitrate Corporation with the Maria Elena Plant, having a production of 550,000 tons, and the Lautaro Nitrate Company with a new plant in construction which will be called Pedro Valdivia and will have a capacity of 700,000 tons.

"Both the above-mentioned processes represent a total of more

than ninety per cent of the possible production of nitrate in economical production costs.

"The new company known as "Cosach" is therefore in condition to initiate negotiations as soon as the project of law is presented to the government and approved by Congress."

The law was approved by the Congress of Chile in July.

COPPER Chile is second to the United States in the world production of copper. The production in 1929 was more than 303,000 tons. The principal producers are the Anaconda Copper Mining Company operating the Chuquicamata mines through the Chile Copper Company, the Potrerillos mines through the Andes Copper Mining Company, and the Kennecott Copper Corporation operating the Braden mines at El Teniente. More than 96 per cent of the copper produced in Chile is by these companies. The production of fine copper by the respective mines during the calendar years 1928 and 1929 was as follows:

	1928	1929
	Metric Tons	
Chuquicamata	120,235	136,351
Potrerillos	47,507	74,364
Braden—(El Teniente)	99,007	79,980

Expenditures in Chile of the above mentioned companies for wages, freights, taxes, merchandise and supplies purchased in Chile, etc., for the year 1929 in terms of Chilean pesos were as follows:

	Andes Copper Mining Company (Including Potrerillos Railway Company) *Pesos*	*Braden Copper Company* *Pesos*	*Chile Exploration Company* *Pesos*	*Total* *Pesos*
1. Wages and salaries	38,197,270.77	37,371,777.67	34,857,519.91	110,426,568.35
2. Maritime and land freights, loading and unloading copper, merchandise, etc.	1,692,993.55	10,379,536.81	12,892,219.68	24,964,750.04
3. Merchandise purchased in Chile	11,383,860.08	8,791,425.90	8,234,659.26	28,409,945.24
4. Taxes and Import Duties paid to Fiscal and Municipal governments:				
Import duties	8,826,622.60	2,732,774.40	6,829,117.76	
Income tax—Companies	7,157,634.99	26,410,943.30	30,879,029.99	
Income tax—Employees	293,298.75	199,776.86	261,505.76	86,928,497.37
Contributions: Various, fiscal and Municipal	773,731.57	454,453.55	2,109,607.84	
5. Social laws	4,855,388.89	5,112,701.54	7,148,307.66	17,116,398.09
6. Sundry expenditures	326,635.46	6,037,387.80	4,964,884.31	11,328,907.57
Total Expenditures, 1929	73,507,436.66	97,490,777.83	108,176,852.17	279,175,066.66

These three copper companies operated at full capacity during the first three months of the year. However, a drop in the demand for copper necessitated curtailing production during the month of May, and operations were continued on a curtailed basis throughout the remainder of the year.

MINING AND EXPORTING OF IRON ORE

The mining of iron ore up to the present is limited to the Tofo iron mines property of the Bethlehem Chile Iron Mines Company, a subsidiary of the Bethlehem Steel Corporation. Production in the calendar years 1928 and 1929 was as follows:

1928	1929
1,601,000 tons	1,783,744 tons

This property was opened up in a small way before the war and during the years 1919 and 1920 was equipped for large tonnage. It has been mining steadily for the last eight years and the total production to date is exactly ten million tons. This ore is shipped to Sparrows Point, Maryland, mainly in 20,000 ton ships which carry the largest cargoes that pass through the Panama Canal.

COAL

The production of coal in Chile shows very little variation from the average for several years past. Below is given the average monthly production for the past five years in metric tons:

1925, 120,000 tons; 1926, 122,000 tons; 1927, 122,700 tons; 1928, 115,000 tons; 1929, 125,000 tons. In 1927 the gross production was 1,472,500 tons; in 1928, 1,381,900 tons; in 1929, 1,507,000 tons.

This industry gives occupation to between eleven and twelve thousand employees and workmen. In January of this year the average number employed was 11,528.

Experiments are being made with Chilean coal to see if it is possible to use it for the extraction of petroleum. Also tests are being made to see if Chilean coal can be used profitably for the making of coke.

AGRICULTURAL PRODUCTION

THE WINE INDUSTRY

The principal agricultural production of Chile is in the Central Valley with an area of 18,000 square miles. It is one of the most fertile regions in the world. Besides the cereals it is notable for its vineyards and orchards. The production of Chilean orchards equals and sometimes exceeds the

yield of California lands. An acre gives from 13,000 to 15,000 pounds of apples. Peaches, pears, plums and apricots show proportionate production. Melons of a special quality are raised and have found a market in the United States. The grape cultivated areas comprise about 200,000 acres of which a third are under irrigation. A vineyard acre produces from 15,000 to 18,000 pounds of grapes. Wine production at present amounts to 105,000,000 gallons annually valued at 120,000,000 pesos (2,434,000). The vineyards of Chile represent a capital of more than 400,000,000 pesos ($48,680,000). Exports of Chilean wines have grown very rapidly—from 129,0000 gallons in 1926 to approximately 1,500,000 gallons at the present time. Germany is the chief foreign consumer, taking about one-half the total quantity exported. Grapes are also exported.

The government has a definite policy of fomenting the wine industry. It supervises technical instruction given to engineers selected from the Agronomical Institute and develops specialists in this field in the schools of practical agriculture. A further measure was the creation of the Service of Wine Culture and Manufacture for consultation and research of the industry. Several years ago experts of the Agronomical Institute were sent to California and to France to study the whole grape industry and since then it has had the benefit of those studies.

The plans for the wine industry are described in the following excerpts from an article "Coöperatives Enter the Chilean Wine Industry" by Ricardo Rodriguez in "CHILE" magazine, April, 1930.

> "The most recent measures to foment domestic production and to stimulate export trade have been the establishment of cooperative storage warehouses and wine plants to assure standardized organization for manufacture and distribution of the products with the supervision and participation of the government. The new system, under which associated vine cultivators send to the warehouse for their region a fixed quota of the annual grape harvest, enables small producers as well as large to dispose of their crop readily and profitably; it also guarantees to the consumer a high-grade product made possible by manufacture on a large scale. It is the object of the new coöperatives, says the regulation which provides for the organization, to make wines, in common, by means of modern installations and processes, in order to obtain superior products, establish definite qualities (to be characteristic of the different regions), lower the general expenses of manufacture, utilize by-products, organize the domes-

tic and export trade, and sell the output, also in common, at prices that consult the interests of producer as well as consumer.

"The work of the government in organizing and promoting the wine industry is directed primarily toward maintaining high standards of production for the development of Chile's export trade. All Chilean wines exported must bear a certificate testifying to their purity and quality. In pursuance of the government plans thirty-four million pesos are being spent in acquisition of land and construction of coöperative plants in the principal producing centers of the country. Eleven warehouses are to be built in the larger producing zones, each having a capacity of over 1,321,000 gallons (50,000 hectoliters); eight in smaller zones having a capacity of about 660,500 gallons (25,000 hectoliters); and twelve mililon pesos are to be spent for terminal storehouses in Valparaíso, San Antonio, Constitución, and Talcahuano, principal ports near the wine-producing zones.

"These plants will be of reinforced concrete, provided with modern automatic machinery, all installations for physico-mechanical aging of wines, as well as refrigerating apparatus for storing wines and fresh grapes designed for ports of the north and export markets. They will also have special equipment for utilization of by-products, which are at present entirely wasted. Among the principal activities of the coöperatives are listed distillation of alcohol from grape skins; manufacture of oil, tartaric acid, cream of tartar, and other like products.

"Coöperatives of 50,000 hectoliters are to be constructed in the following cities; San Bernardo, San Fernando, Curicó, Lontué, Molina, San Javier, Villa Alegre, Linares, Parral, Chillán, Coelemu. The cities of San Felipe, Melpilla, Peumo, Cauquenes, Quirihue, San Carlos, Yumbel, and Río Claro will be the sites of the new 25,000 hectoliter storage plants. Annexed to each coöperative will be an auxiliary warehouse for sales of machinery, fertilizer, sulphur, and other products for improved vineyard cultivation. There will be a plant having special facilities for pisco (a liqueur) and raisin manufacture in Paihuano. Packing equipment for both export and home trade will be taken care of through a special plant situated in a timber-land of the south, output of which will be sufficient to allow exportation of crates and casks to Argentina and other countries.

"The plan of warehouse construction is as follows: During

1930 cooperatives will be built in Villa Alegre, Curicó, Parral, Molina, and Cauquenes; during 1931, in San Fernando, and San Bernardo, San Antonio. The third year of construction will see plants installed in Coelemu, San Javier, Lontué, Quirihue, Talcahuano; and the fourth, in Linares, Chillán, Melpilla, Peumo, San Carlos, Yumbel, Valparaíso, Constitución.

"Once the warehouses are finished, they will be handed over for operation to the coöperative vineyard owners, who have the right to acquire them on long-term payments. Initial capital required for the first year of operation will be supplied by the government up to the sum of 50,000 pesos for each 50,000 hectoliter plant and 25,000 pesos for each 25,000 hectoliter plant. These sums are to be returned to the State without interest after the first annual liquidation has taken place. Reserve funds shall then be established, constituting a minimum of five per cent of the net profit by the owners, to be devoted to economic development of the coöperative (payments to the State, etc.), and to any exigencies which may arise.

"On receiving the vineyard product of its members, the coöperatives will facilitate loans on such security up to 60 per cent of its taxation value. Such value is determined on the basis of weight, vinestock, color, etc. Final settlement with each member, deductions being made for administrative expenses, taxes, interest, etc., is to take place annually, not later than March 1st. The coöperatives may subsequently obtain loans up to 75 per cent of the value of the wines which they offer as security from the Caja de Crédito Agrario, Caja Nacional de Ahorros, and other similar organizations. Another facility authorized by the government is a thirty per cent rebate on railroad rates for transportation of wines and for fertilizer, tools, etc., to be supplied the members of the coöperatives, such rebates to the railroads for inclusion in the Extraordinary Budget.

"The coöperatives are to be under the administration of the General Body of Associated Owners, a directorate, a manager, and a technical expert. The directorate is encharged with management of business affairs in accordance with regulations that have been established by the members; the manager is in charge of general administration of the coöperatives, office management, etc., under the supervision of the directorate; the technical expert has charge of wine manufacture and by-products. The coöperatives are under the further supervision of the Ministry of Pro-

motion through the Service of Wine-Culture and Manufacture of the Department of Agriculture, to which body each coöperative must send annual reports of its financial status and progress.

"Sales of all the products of the coöperatives are in charge of a committee of two members appointed by the directorate specifically for this purpose and supervised by the manager."

SHEEP AND CATTLE INDUSTRY

Wool and cattle raising are the major agricultural industries after the cereals and fruits. They are situated chiefly in the south. Some live cattle are exported, but the chief trade in animals is a domestic one, the shipments being from the south to the nitrate and mining regions of the north.

The sheep growing industry is an extensive one. Several foreign and domestic companies with large capital are engaged in it. The principal production is in the Magallanes region which includes a section of Tierra del Fuego and other islands of the straits. The wool from the region of Punta Arenas, now called Magallanes, is known as Punta wool and has a softer, finer fiber than the English or Oceanic wools. They make a finer textile or garment and are preferred by English manufacturers on this account and because they are more economical. Two and half kilos of Magallanes wool will produce three and a half meters of pure wool fabric of medium weight, or at the rate of 350 grams per square meter. This is the result of the peculiar climatic conditions of the region, highly favorable to the production of a fine type of wool, added to the fact that most of the sheep bred have the best Merino blood in their veins. The product is wool of light weight, excellent quality, and of exceptional whiteness.

The frozen mutton industry supplements the wool industry and a considerable trade in it has grown up. Approximately 8,750,000 acres (3,500,000 hectares) are given over to sheep raising in Magallanes. In 1929 there were more than 2,200,000 sheep on the farms in Magallanes. Before the killing season began there were more than 4,500,000 animals. The number killed in the frozen meat establishments was more than 1,300,000.

IRRIGATION AND COLONIZATION

The expansion of agricultural production by increasing the area of irrigated lands has long been a fixed policy of the government. It provides for the northern regions adjacent to the nitrate fields as well as for other sections. It is expected that agricultural production will be increased one hundred per cent within the next twenty years due to irrigation projects involving 1,397,500 acres of land. Seventeen of these projects costing $24,000,000 were got under way in 1929. When these are completed Chile will have four million acres under irrigation.

Measures have been taken to increase the production of lands, already under cultivation and especially to foment the cultivation of the farms. With this end in view the Agricultural Credit Bank was instituted. The Farm Mortgage (Prenda Agraria) Law enacted during 1926 was substantially modified during 1927; it permitted mortgages to be granted on agricultural products, agricultural machinery, cattle, and timber, so as to fill the need of the agriculturists for a credit institution that might act midway between the long credits, which could be granted by the mortgage banks on properties, and the short loans from commercial banks. The bank makes loans on reasonable terms and also facilitates the procuring of seeds, fertilizers and livestock. The Agrarian loan contract which has been in operation for two years enables the farmer to obtain capital on the guaranty of production or on implements and tools. The Credit Bank loans to both small and large farmers on animals and reproduction, farm machines, seeds or fruits, harvested or about to be harvested, and forest products, raw and manufactured.

Colonization is another feature of the government program for fomenting agricultural production. For this purpose the Bank of Agricultural Colonization has been instituted. This institution forms agricultural colonies or centers with the object of increasing productions by sub-dividing the lands into parcels. It forms in the land acquired inventories, or colonies, constructing dwellings, roads, irrigation canals and so forth in order that intensive cultivation may be started without delay. It establishes a plan of work for each nucleus of production and grants to the colonists financial facilities while it also takes charge of the establishment of coöperatives and provides capital to establish factories in which to utilize the raw material obtained. For the acquisition of lands by groups of persons the Credit Bank requires besides certain legal safeguards 15 per cent of the value of the farm assuming responsibility for the whole debt so that the borrower has only the Credit Bank as his creditor. The bank also makes individual loans to the colonists for a period of from one to five years payable in annual quotas according to the nature of the investment. As a complement to its general work the government through the agencies noted above provides an admirable organization of rural instruction by means of practical schools distributed in the

leading productive centers of the country where the students in the same district acquire the indispensable technical knowledge. This also serves to develop the liking for work on the farm.

To facilitate the acquisition of fruit trees by small growers, the government has organized a "fruit-tree exchange," through which trees are purchased by the State in large quantities and distributed to individual growers at great savings.

During the existing world depression the government has carried out a definite plan of farm relief. A measure taken by the States to aid agricultural interests suffering from a decline in world prices was the decision to purchase from the farmer surplus of cereal production remaining after the national demand has been supplied. For wheat, production this year is approximately 10,000,000 metric quintals, consumption around 8,000,000 quintals.

Agricultural warehouses established by the government throughout important districts were established to prevent Chilean farming interests from being affected by the slump in world markets. These warehouses receive agricultural products to serve as security against loans advanced the farmer until such time as his products are disposed of in domestic or foreign markets.

State railways took similar measures and reduced freight rates on products transported to ports and frontiers for export. The National Agricultural Bank likewise took steps to relieve the farmer.

FOREIGN COMMERCE

(From Chilean Official Statistics)

WORLD TRADE

	Exports		*Imports*		*Total*	
	Pesos	*Dollars*	*Pesos*	*Dollars*	*Pesos*	*Dollars*
1928	...1,966,000,000	239,262,000	1,169,000,000	142,267,000	2,365,700,000	287,905,000
1929	...2,289,800,000	268,668,000	1,630,600,000	198,444,000	3,920,400,000	477,112,000

The essentials of Chile's foreign commerce are the export of raw materials, principally mineral products such as nitrates, copper, and iron ore, and the import of fuel oils, industrial machinery, iron and steel products, electrical equipment and other manufactured articles, automobiles, sacks for nitrates, textiles, sugar and some other food commodities. The tendencies during 1929 were thus summarized by the "Monthly Bulletin" of the Banco Central:

> "An analysis of our foreign commerce during the past year, according to commodity groups, shows that under the heading of

> imports investment products have experienced the greatest increase as compared with 1928. Among these, metallurgical products have risen 53.3%, machinery, utensils and tools for industrial purposes by 64.6%, transport material by 42.7%, automobiles 150%. The increase corresponding to cement in this group is 143%. In the category of consumption products, textiles rank first, the importation of which increased in 1929 by 27%. Chemical products rose by 25.8% and the manufacture of paper, by approximately 50%."

Great Britain, Germany and Belgium are the principal European sources of supply for Chile. The existing situation is described by the magazine "Chile" in April 1930, as follows:

> "Since the war German manufacturers have been making a strong effort to regain their position in the Chilean machinery market and in 1928 succeeded in taking 25 per cent of the business. This was nearly double Germany's proportion in 1926 and 1927 and represents a distinct advance over any year since 1914.
>
> "During 1928 Germany supplied the bulk of Chilean purchases of spinning, woodworking, and brewers' machinery, tannery equipment, candlemaking machinery and equipment, and dredging machinery, and also had a substantial lead in sales of laundry machinery and equipment, flour and grain milling machinery, turbines and elevators.
>
> "The proportion of Chilean machinery business enjoyed by the United Kingdom has been appreciably less since the war than previously and has declined from the comparatively high figure of 32 per cent in 1922 to 12 per cent in 1926 and 1927 with a recovery to 14 per cent in 1928. In 1928 the United Kingdom was the principal supplier of gas-producing machinery, weaving machinery, steam boilers, and water and gas meters and also did a substantial business in several other items including flour and grain milling machinery, engines, and turbines.
>
> "Although Belgium supplies but a minor part of Chile's machinery requirements, its business, after dropping from a high of 8 per cent of the total in 1924 to 1 per cent in 1926, has lately shown a tendency to recover and reached 4 per cent of the total in 1927 and 5 per cent in 1928. Mining machinery, flour and grain milling machinery, and engines and replacements therefor, constitute the leading items in Belgium's shipments of machinery to Chile.

"Of the different lines of machinery that Chile buys abroad, mining machinery, including mine pumps, and rock drills, is by far the most important, and in 1928 reached a total of nearly 17,800,000 pesos. This amount represented a decline, however, to less than half of the volume reached in 1927, due in part no doubt to the heavy buying of previous years, since the chief customers for mining machinery, the nitrate and copper industries, were in excellent condition in 1928.

"Among the other leading commodities that Chile buys abroad, imports of cranes, weaving machinery, and spinning machinery during 1928 declined sharply under the previous year. On the other hand, with the establishment of several new enterprises, imports of flour and grain milling machinery took a sudden upward turn totaling nearly 2,600,000 pesos, as compared with some 850,000 pesos in 1927. Of this amount, Germany furnished 33 per cent and the United States 21 per cent, while the balance was fairly equally distributed between the United Kingdom and Belgium.

"Some of the other principal items also showed substantial sales increases over 1927, including particularly steam boilers and parts, boiler feed injectors, engines, turbines, and the miscellaneous unclassified items, imports of which rose from some 17,000,000 pesos in 1927 to over 26,000,000 pesos in 1929."

TRADE WITH THE UNITED STATES

Since the world war trade with the United States has been the principal factor in Chile's foreign commerce. It is approimately 60% of the total exports and imports. About 34 per cent of Chilean imports are from the United States. In 1929 out of 75 countries and groups listed in the official statistics of the Department of Commerce it was sixteenth as a source of supply and out of eighty-seven listed was twentieth as a market. In 1928 the exports from Chile to the United States in terms of dollars as calculated by the Department of Commerce were $45,000,000 and the imports into the United States from Chile $81,028,000. In 1929, exports $55,776,000; imports, $102,025,000; total, $157,701,000. The percentage of world trade imports in 1928 was, United States 30.7%; the United Kingdom, 17.7%; Germany, 13.9%; France, 4.8%. The principal exports of Chile to the United States are the mineral products—nitrates, copper bars and iron ore. Nitrates, chiefly used as fertilizers, form the chief commodity. The value in 1928 was $40,745,000.

Bar copper was valued at $35,450,000. Fruits and vegetables are becoming an appreciable factor in Chilean agricultural products.

The principal exports of the United States to Chile are industrial machinery of which mining machinery is the most important, electrical equipment, fuel oils, automotive products, textiles and chemicals. Chile is the third country in the world in the importation of aircrafts and aircraft material from the United States, the value now approximating $1,000,000 annually. Chemical products for industry have shown a marked increase.

Among the various commodity lines, the United States has for many years supplied the bulk of Chile's requirements for mining machinery and equipment, and in 1928 enjoyed 83 per cent of this business as compared with 5.4 per cent of the United Kingdom, 6.4 per cent for Germany and 4.4 per cent for Belgium. Moreover, in many of the other machinery lines the United States also secures a substantial share of the business and in the case of cranes, shoemaking machinery, lathes, replacements for boilers and engines, and the various lines included in miscellaneous machinery, easily outdistances its competitors. In 1929 the market for industrial machinery was well maintained.

CHILE'S GREAT ROAD-BUILDING PROGRAM

(*From an article by Carlos Concha Fernandez in* "CHILE" *magazine, January,* 1930.)

"THE geographical surface of Chile is unique. It has a length of some 2,500 miles, extending from north to south between latitudes 18° and 56° S. and an area of 290,084 square miles. The nature of its soil varies from the northern zone, which is composed for the most part of dry, arid lands, rich in minerals, to the southern zone, which is humid and characterized by luxuriant vegetation. The south is also the region of lakes and rivers of clear and tranquil waters, and constitutes the most attractive zone for tourists. The central region has moderate rainfall and varied production.

"From east to west there is the change from snowy mountains to seacoast, with the great Central Valley between the Andes and the coastal ranges. In the north, as well as in the central and southern areas, the climate is mild and the temperature but slightly variable.

"The Pacific ocean, stretching along her entire length, offers Chile communication by sea. As means of transportation by land she has the longitudinal railroad from Zapiga (between Arica and Iquique) to Puerto Montt, covering 2,263 miles, supplemented by transversal railways to form a network of about 8,000 miles. Road developments have reached a total of almost 25,000 miles.

"Until 1920 the government of Chile set aside each year for maintenance of roads a portion of the national budget, which was, however, insufficient to keep even the existing roads in an adequate state of repair for traffic. From 1920 on the government has been placing more and more emphasis on roadbuilding, this interest culminating during the present administration. His Excellency, the President, Señor Ibañez, has evinced complete understanding of the great national and general interest that attaches to the construction of good roads.

"The present administration has put road projects on a business basis, consolidating all plans for public works into one. For the planning and construction of roads and highway bridges it has created an office called the Department of Roads, under the jurisdiction of the Director General of Public Works. It has consolidated loans and established an Extraordinary Budget to take care of revenues and expenditures under this plan. The Budget provides for a loan of 1,500,000,000 pesos for public works to be constructed over a period of six years. Of this sum it was recommended that 95,000,000 pesos be used for the planning and construction of roads.

"The loan of 1,500,000,000 pesos for public works is met by ordinary taxes under the Extraordinary Budget. The 'superavits' are assigned to the service of the loans of the General Plan of Public Works. a recent law established the formation of an Emergency Fund with which to attend, if necessary, the service of the External Debt and to avoid a suspension of the Plan of Public Works. This law has been carried into effect and at present $2,000,000 U. S. Currency invested in bonds that yield 6 per cent is deposited in the National City Bank of New York.

"This series of loans, which involves operations up until 1933, added to the income obtained from the permanent laws for roads and bridges, assures a semi-annual investment of not less than 80,000,000 pesos until 1933. Road funds are not being used

on street developments, since cities have their individual incomes for public works, including street paving.

"The government proposes to set aside the greater part of the proceeds of the Road Law for the maintenance of roads already existing, and of the loans for the planning and construction of the system of national roads.

"The parts of the system of national roads for which the loans are intended total 6,000 kilometers, and the cost of construction and improvement of roads now existing is estimated at 650,000,000 pesos. This system includes the longitudinal road from Arica to Puerta Montt, more than 3,000 kilometers in length, passing through the principal cities of the country. This entire road is practically constructed, but it is necessary to improve and complete it. The longitudinal road united with the road from Santiago to Los Andes and Mendoza (Argentina) will constitute the Chilean part of the proposed Pan-American road. The system of national roads includes, moreover, the transversal routes from this road to the principal ports and to the agricultural, industrial, and mining production centers.

"The construction of secondary roads is effected with funds provided by the Road Law, according as such construction is permitted by means at hand, or my medium of new loans.

"The Department of Roads is divided into four sections; Road planning, bridge planning, road construction, and bridge construction. Under the jurisdiction of the Director of Roads are three supervising engineers, and four engineers at the heads of the respective sections above-mentioned. The system which is followed in calculations, whether for roads or bridges, is generally that of making a complete study consisting of plans, specifications, estimates, and bases of contract. In drawing up these projects general norms have been established for the study of roads and for the computations of bridges. Studies are generally made using specifications of existing roads as a basis and introducing necessary variants for perfecting the plans in question; but studies have also been following completely new routes.

"Maintenance of roads is provided for by proceeds of the Road Law. Up until six months ago road maintenance was in charge of the Department of Roads. But at that time it became a separate section, coming under the Ministry of Promotion. In the administration of funds for maintenance, the Intendentes or

governors of each province naturally play a very important part. The central office for maintenance of roads is called Inspection General of Roads and Bridges. It has a personnel similar to that of the Department of Roads, but smaller. In each province there is an engineer who directs the labors, under supervision of this office. Inasmuch as the complete separation of the Department of Roads and the Office of Maintenance is a recent innovation it is impossible to make any definite statement in regard to the results of this system.

"The Road Law was supplemented in 1925 by the Bridge Law, which provides special revenues for highway bridges, obtained through a tax on gasoline imports, special license, requirements for trucks, tax for transportation of animals, and other imports. The Bridge Law provides for sufficient funds to construct the bridges simultaneously with the roads."

Latest figures show that Chilean roads now total 40,000 kilometers, of which 21,430 kilometers (13,308 miles) are first class roads, and 17,864 kilometers (11,773 miles) are second class roads. The total length of modern highways built and to be built during 1928-1935 is 7,020 kilometers (4,359 miles).

INDUSTRIALIZATION IN CHILE

(*Analysis by Harold M. Randall, Bureau of Foreign and Domestic Commerce, of reports by Commercial Attaché Ackerman.*)

"THE present-day trend toward Chilean industrialization with the social, political, and economic changes attendant thereto, presents an illustrative example of the steady progress that is being achieved by that nation.

"The predominant industries of Chile are mining and agriculture. In relative importance that two differ in that mineral products are of chief importance in the export trade while agricultural and pastoral products represent the greater economic undertakings from a domestic point of view. The benefits that accrue to Chile from the development of mineral resources are largely found in the export duties levied, principally those upon nitrates, in the general labor costs paid to native labor and in the permanent improvements made in the different sections of the country by additional plant equipment, roads, railways, and

other manifestations of large-scale mining operations.* Agricultural and pastoral enterprises attain their greatest relative position in the central and southern sections of the country.

"The leading exports of the nation are nitrates, copper, iodine, raw wool, meat, barley, oats, beans, peas, and lentils. These products comprised 85 per cent of the total exports in 1927; the first three products of the mines, accounting for 79 per cent. There were no manufactured products of importance in the export trade with the exception of wine, the local production and exportation of which is on the increase. Yet, owing to the low prices obtained, the total value of wine exports is not sufficient to give them a place among the items of major importance. The chief products imported during 1927 were cotton fabrics, sacks for nitrate, iron and steel manufactures, railway supplies and tools, automobiles, sugar, machinery and tools for manufacturing, mining machinery, crude petroleum, cattle, electrical apparatus, and woolen fabrics.

"The greatest percentage of increase in industries since 1920 is in tobacco and textiles, although these commodities are by no means the chief ones in volume of production. Manufactures have been steadily increasing. In 1925 production as a whole was 48 per cent greater than in 1920 and two and one-half times that of 1912. The total horsepower reported to be used in industry was 53 per cent greater in 1925 than in 1920 and nearly six times that used in 1912. The total number of employees has increased but slightly in recent years, being 8 per cent greater in 1926 than in 1920, but 3 per cent less than in 1912. This change is accounted for in part by more complete data available in 1926, and in part by the fact that large manufacturing establishments were separated in the 1926 statistical data from the small shops of little individual importance. Another standard which demonstrates the general increase is found in the statistics relative to the consumption of raw materials. This consumption was 179 per cent greater in 1925 than in 1913. Throughout the entire period Chile has furnished approximately two-thirds of the total of the raw materials used.

"The latest available data, collected by the Chilean government and pertaining to capital invested in industry, shows a 236 per cent increase in 1925 over 1912 and a 133 per cent increase

* Additional benefits accruing to Chile from her mineral resources are the large income taxes paid by the American-owned copper companies, and also the purchase of such machinery, tools, supplies, etc., as are obtainable in Chile—Compiler.

in 1925 over 1920. Sufficient local capital exists to care for reasonable industrial expansion. In fact, it is noticeable that in recent years there is a tendency to divert local capital from mining industries and to invest it in manufacturing enterprises.

"The number of small, or individually operated plants in Chile is decreasing, and the number of corporations is increasing. This tendency to centralization means increased capitalization and greater productive efficiency.

"Steam power represented about 43 per cent of the total horsepower reported in 1926, with electricity listed at 27 per cent and hydraulic power at 23 per cent. The total horsepower increased 308 per cent in 1926 over 1913 and the number of motors and engines increased 954 per cent with the greatest gain in power noted in that derived from electricity and crude oil.

"These changes represent a natural trend, inasmuch as the general increase of electrical power is a result both of the abundance of electrical power sites available in Chile and the scarcity of a supply of the proper grade of coal.

"Chile possesses the essentials requisite to reasonable industrial progress. Abundant raw materials and power resources are available, the climate is favorable, and the laboring classes have shown an adaptability to machine production which bids fair to continued progress. The government provides substantial aids to encourage new industries. A protective tariff is the general policy, and import prohibitions of certain articles unless they conform to certain requisites and regulations are designed to aid home industry. Direct subsidies are granted in such a way that they are graduated over a period of years, the amount of the subsidy diminishing from year to year. Another method sometimes employed is that of granting a bonus on state-owned production, while a consolidated tax on iron ore has been devised in such a way as to make available raw materials for local consumption at cost price.

"Of growing importance from a financial point of view, as it affects government fiscal policies, is the increase in wealth represented by the growth of industrial establishments and the profits realized from them. This wealth serves as another source from which revenue may be obtained through the regular channels of property and corporation taxes. Every addition to the total taxable wealth of Chile serves to lessen its dependence upon the

export taxes derived from nitrates as the chief source of revenue. With the centralization of industry, the increased competition that must necessarily result, and with the inherent capability of the Chilean people lies the hope of continued progress and development. The measure in which this capability has been demonstrated in the past substantiates the belief that continued and healthful progress will be made."

SUNDRY INFORMATION

PRESIDENT'S REVIEW OF CHILEAN PROGRESS IN 1930

Some of the leading points in Chilean progress will be found in the following summary from President Ibañez' annual message to Congress on May 22:

Municipal public works have been actively promoted throughout the Republic through the consolidated municipal loan of fifteen million dollars issued under State guaranty. Seventy-five municipalities participated in this loan.

The President also called attention to the care which has been given to the selection of provincial and municipal officials and to seeing that the performance of their duties is on a high plane. In this connection the President urged upon Congress the early passage of the Code of Internal dministration, providing for many important reforms in provincial and municipal government.

State telegraph lines were increased by 120 kilometers last year. Post Office receipts were 33,792,022 pesos.

Following the settlement of the Tacna-Arica problem Chile and Peru have been settling definitely the boundary line that is to divide both countries. Decision has already been made on 120 kilometers of the boundary.

Chile last year was represented at the Postal Conference of London and the Road Conference of Rio de Janeiro. Treaties of friendship and amity were signed with Egypt and Poland. The Kellogg Pact was also adhered to.

The government proposed an amalgamation of national shipping interests in order to meet foreign competition.

The financial situation of the country has continued showing the improvement that began a few years ago. The ordinary budget for 1929 closed with a surplus of 77,600,000 pesos. This budget had been approved by Congress authorizing expenditures of 1,071,600,000

pesos and income of 1,123,300,000 pesos with an estimated surplus of 51,700,000 pesos.

For the continuation of the public works plan the government has authorized the acquisition of 3,500,000 dollars in bonds of the external debt and 10,000,000 pesos on the internal debt, to be devoted to the emergency fund established in 1928 with two million dollars.

Taxation last year produced highly satisfactory results. Internal revenue brought 362,384,100 pesos or 32.84% of total State revenue. Gross customs house receipts totalled 696,751,436 pesos, corresponding to 364,668,941 pesos for import duties and 302,401,839 for export duties and 29,680,665 from other sources.

As a precautionary measure, the government has decided not to start any new public works. The expenses for the current year will be reduced by 50,000,000 pesos through economies. For next year it is expected to make a reduction of not less than 10% in the proposed budget as compared with this year's budget.

At present there are 3,625 State schools served by 9,856 teachers with 434,124 pupils.

FACTS ABOUT CHILE

Area—289,776 square miles (about equal to the State of Texas).

Population—4,364,000 (Revised Census, May, 1929).

Distance from New York to Valparaiso via Panama Canal—5,335 miles.

Aircraft mail time from New York to Santiago—6 days.

Southernmost town in the world—Magallanes (Punta Arenas), South Latitude 53°, 10′.

PUBLICATIONS OF CHILE-AMERICAN ASSOCIATION

Relief Map of the United States, 1920.

Reciprocal Resources of Chile and the United States, (English and Spanish), New York, 1921.

Constitution of the United States of America and Amendments, with Historical Introduction (English and Spanish), New York, 1922.

American Solidarity; Address of Hon. Augustin Edwards, Minister of Chile in London, New York, 1922.

Fifth Pan American Conference at Santiago and Former Conferences, New York, 1923.

Reciprocal Trade and Resources of Chile and the United States (English and Spanish), New York, 1924.

Addresses at Farewell Luncheon to Ambassador Mathieu, New York, 1926.

Mutual Trade and Resources of Chile and the United States (English and Spanish), New York, 1926.

Recursos y Comercio Mutuo de Chile y los Estados Unidos, Santiago, 1928.

Discurso del President Coolidge en el Aniversario del Armisticio, New York, 1928.

(All the above publications are out of print.)

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